

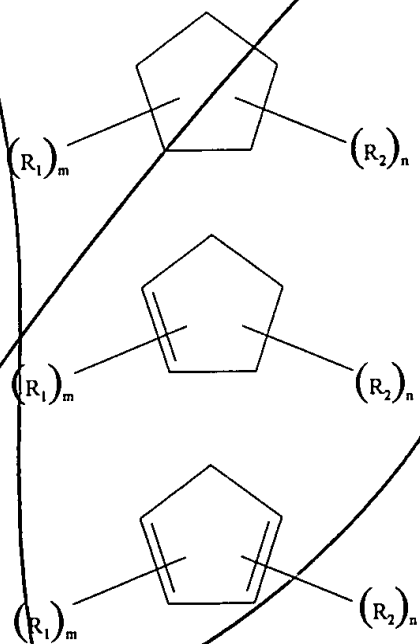


APPENDIX B

CLEAN SET OF CLAIMS PER AMENDMENT U.S. APPLICATION SERIAL NO. 09/534,282

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1. A magnetic recording medium, comprising:
- a non-magnetic support;
 - a magnetic layer formed on the support; and
 - a lubricant layer over the magnetic layer, the lubricant layer including a compound selected from the group consisting of hydrocarbyl-substituted cyclopentane, hydrocarbyl-substituted cyclopentene, hydrocarbyl-substituted cyclopentadiene, and mixtures thereof; and
- wherein the hydrocarbyl consists of carbon and hydrogen.

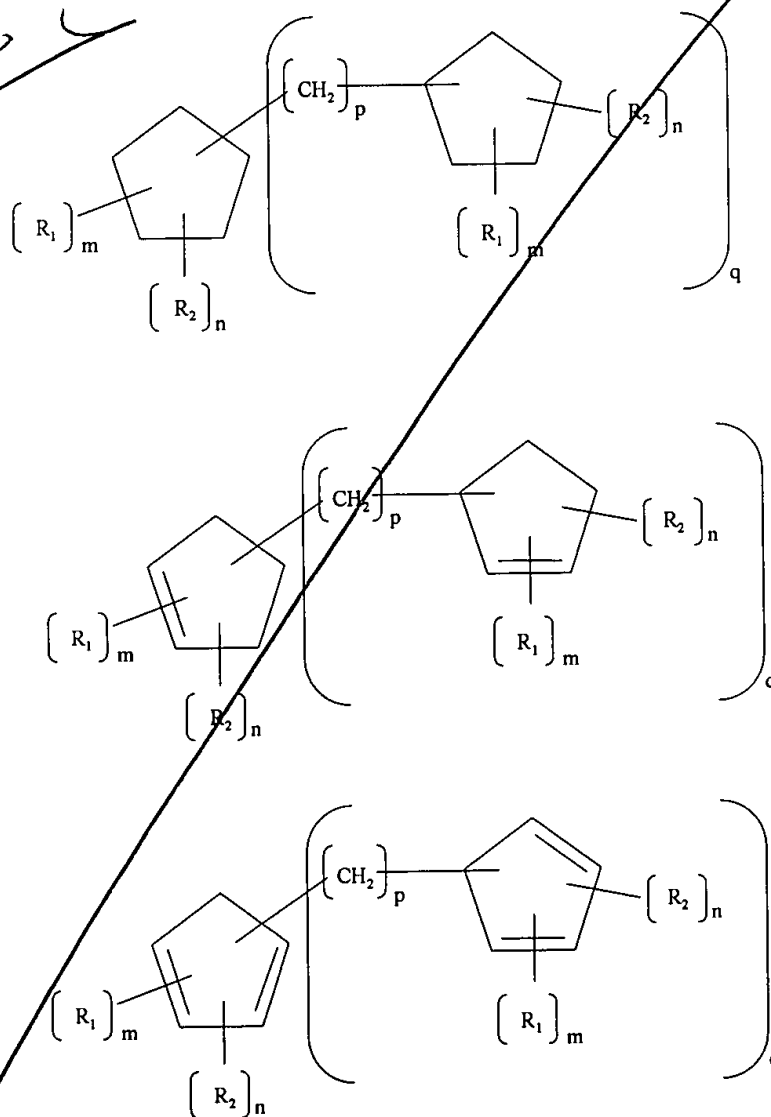
2. The magnetic recording medium of claim 1, wherein the lubricant layer includes a hydrocarbyl-substituted cyclopentane, a hydrocarbyl-substituted cyclopentene, or a hydrocarbyl-substituted cyclopentadiene as represented by the following respective formulas:



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wherein R_1 and R_2 are respectively a hydrocarbyl group, and m and n are respectively zero or a positive integer and the sum of $m + n$ is greater than zero; and
 wherein the hydrocarbyl consists of carbon and hydrogen

11. The magnetic recording medium of claim 1, wherein the hydrocarbyl-substituted cyclopentane, hydrocarbyl-substituted cyclopentene, or hydrocarbyl-substituted cyclopentadiene are represented by the following respective formulas:

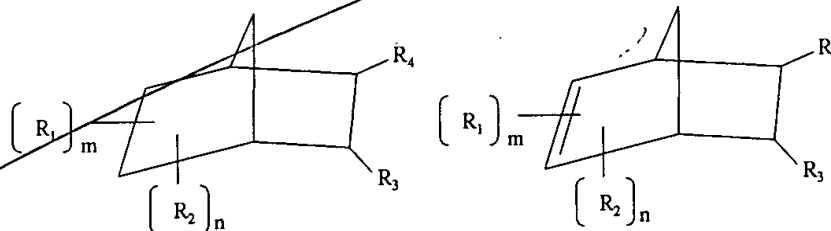


wherein p is 1, 2, 3, ..., or 10; q is 1, 2, 3, ..., or 10; m and n are zero or a positive integer;

R₁ and R₂ are individually a hydrocarbyl group; and

wherein the hydrocarbyl consists of carbon and hydrogen.

12. The magnetic recording medium of claim 1, wherein the hydrocarbyl-substituted cyclopentane, hydrocarbyl-substituted cyclopentene, or hydrocarbyl-substituted cyclopentadiene are represented by the following respective formulas:

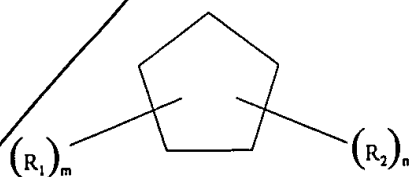


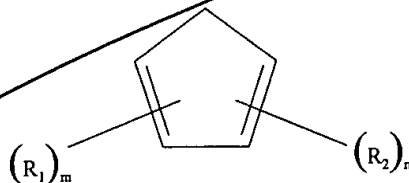
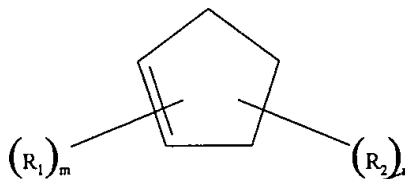
wherein m and n are zero or a positive integers; R₁ and R₂ individually are a hydrocarbyl group; R₃ and R₄ individually are hydrocarbyl; and

wherein the hydrocarbyl consists of carbon and hydrogen.

13. The magnetic recording medium of claim 1, further comprising:
a protective layer between the magnetic layer and the lubricant layer.

14. The magnetic recording medium of claim 13, wherein the lubricant layer includes a hydrocarbyl-substituted cyclopentane, a hydrocarbyl-substituted cyclopentene, or a hydrocarbyl-substituted cyclopentadiene as represented by the following respective formulas:

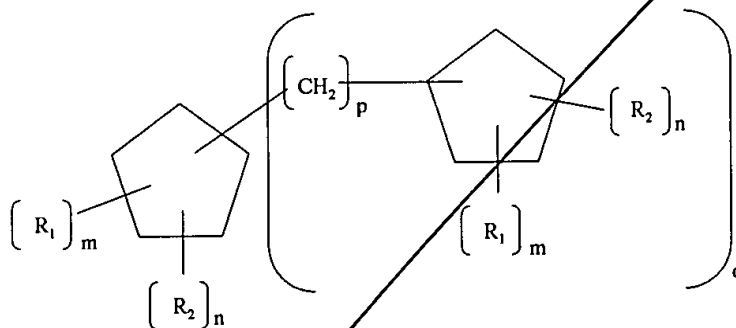


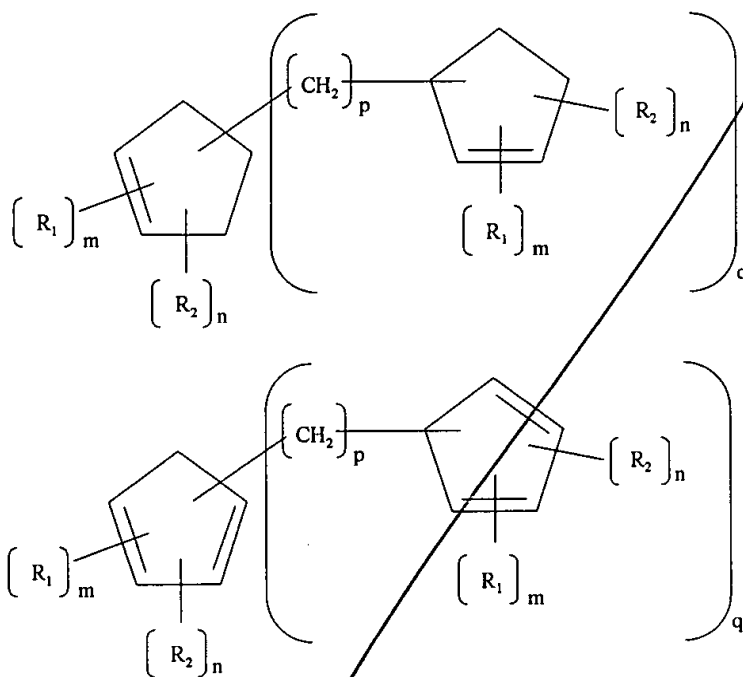


wherein R_1 and R_2 are respectively a hydrocarbyl group, and m and n are respectively zero or a positive integer and the sum of $m + n$ is greater than zero; and
 wherein the hydrocarbyl consists of carbon and hydrogen

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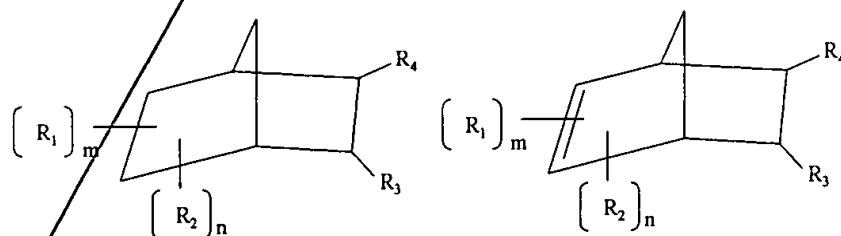
23. The magnetic recording medium of claim 13, wherein the hydrocarbyl-substituted cyclopentane, hydrocarbyl-substituted cyclopentene, or hydrocarbyl-substituted cyclopentadiene are represented by the following respective formulas:





wherein p is 1, 2, 3, ..., or 10; q is 1, 2, 3, ..., or 10; m and n are zero or a positive integer;
 R_1 and R_2 are individually a hydrocarbyl group; and
 wherein the hydrocarbyl consists of carbon and hydrogen.

24. The magnetic recording medium of claim 13, wherein the hydrocarbyl-substituted cyclopentane, hydrocarbyl-substituted cyclopentene, or hydrocarbyl-substituted cyclopentadiene are represented by the following respective formulas:



wherein m and n are zero or a positive integers; R_1 and R_2 individually are a hydrocarbyl group; R_3 and R_4 individually are hydrocarbyl; and

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wherein the hydrocarbyl consists of carbon and hydrogen.

25. A magnetic head, comprising:

a head; and

a lubricant layer over at least a portion of the head, the lubricant layer including a compound selected from the group consisting of hydrocarbyl substituted cyclopentane, hydrocarbyl substituted cyclopentene, hydrocarbyl substituted cyclopentadiene, and mixtures thereof; and

wherein the hydrocarbyl consists of carbon and hydrogen.

26. A data storage/retrieval device, comprising:

a magnetic recording medium including a magnetic layer over a support and a lubricant layer over the magnetic layer, the lubricant layer including a compound selected from the group consisting of hydrocarbyl substituted cyclopentane, hydrocarbyl substituted cyclopentene, hydrocarbyl substituted cyclopentadiene, and mixtures thereof; and

a magnetic head adjacent to the magnetic recording medium, the magnetic head sliding on the magnetic recording medium to read and write information on the magnetic recording medium; and

wherein the hydrocarbyl consists of carbon and hydrogen.

27. The data storage/retrieval device of claim 26, further comprising:

a power supply for applying a voltage across the magnetic recording medium and the magnetic head for reading or writing information on the magnetic recording medium.

28. The data storage/retrieval device of claim 26, wherein the device is a computer disk drive.

29. A computer, comprising:

a CPU;

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a disk drive connected to the CPU so that the disk drive can communicate with the CPU, the disk drive including:

a magnetic recording medium having a magnetic layer over a support and a lubricant layer over the magnetic layer, the lubricant layer having a compound selected from the group consisting of hydrocarbyl substituted cyclopentane, hydrocarbyl substituted cyclopentene, hydrocarbyl substituted cyclopentadiene, and mixtures thereof; and

a magnetic head adjacent to the magnetic recording medium, the magnetic head sliding on the magnetic recording medium to read and write information on the magnetic recording medium; and

wherein the hydrocarbyl consists of carbon and hydrogen.

30. A method of manufacturing a magnetic recording medium, comprising:

providing a non-magnetic support;

forming a magnetic layer on the support; and

forming a lubricant layer over the magnetic layer, the lubricant layer including a compound selected from the group consisting of hydrocarbyl substituted cyclopentane, hydrocarbyl substituted cyclopentene, hydrocarbyl substituted cyclopentadiene, and mixtures thereof; and

wherein the hydrocarbyl consists of carbon and hydrogen

31. The method of claim 30, further comprising:

forming a protective layer on the magnetic layer between the lubricant layer and the magnetic layer.

32. The magnetic recording medium of claim 1, wherein the lubricant layer further comprises one or more additives.

33. The magnetic recording medium of claim 32, the additives are cyclic phosphazenes, metallic soaps, fatty acids, amides, fatty acid esters, higher aliphatic alcohols, monoalkyl

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phosphates, dialkyl phosphates, trialkyl phosphates, paraffins, silicone oils, animal oils, vegetable oils, mineral oils, higher aliphatic amines, inorganic fine powders, resin fine powders, unsaturated aliphatic hydrocarbons, or a mixture thereof.

34. The magnetic recording medium of claim 13, wherein the lubricant layer further comprises one or more additives.

35. The magnetic recording medium of claim 34, the additives are cyclic phosphazenes, metallic soaps, fatty acids, amides, fatty acid esters, higher aliphatic alcohols, monoalkyl phosphates, dialkyl phosphates, trialkyl phosphates, paraffins, silicone oils, animal oils, vegetable oils, mineral oils, higher aliphatic amines, inorganic fine powders, resin fine powders, unsaturated aliphatic hydrocarbons, or a mixture thereof.

36. The magnetic recording medium of claim 1, wherein the lubricant layer including a mixture of two or more lubricants; one lubricant is selected from the group consisting of hydrocarbyl-substituted cyclopentanes, cyclopentenenes, and cyclopentadienes which are not functionalized; another lubricant is selected from the group consisting of hydrocarbyl-substituted cyclopentanes, cyclopentenenes, and cyclopentadienes which are functionalized.

37. The magnetic recording medium of claim 13, wherein the lubricant layer including a mixture of two or more lubricants; one lubricant is selected from the group consisting of hydrocarbyl-substituted cyclopentanes, cyclopentenenes, and cyclopentadienes which are not functionalized; another lubricant is selected from the group consisting of hydrocarbyl-substituted cyclopentanes, cyclopentenenes, and cyclopentadienes which are functionalized.